

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	GN Docket No. 07-45
Inquiry Concerning the Deployment of)	
Advanced Telecommunications Capability to All)	
Americans in a Reasonable And Timely Fashion,)	
and Possible Steps To Accelerate Such Deployment)	
Pursuant to Section 706 of the Telecommunications)	
Act of 1996)	

COMMENTS

Clearwire Corporation, on behalf of itself and its license-holding and service-providing subsidiaries (collectively “Clearwire”), hereby files these Comments in the Federal Communications Commission’s (“Commission”) above-referenced proceeding examining, once again, U.S. broadband deployment and availability.¹ Through its Fifth § 706 Inquiry, the Commission seeks information necessary for it “to analyze and assess whether infrastructure capable of supporting advanced services is being made available to all Americans.”² As an international provider of next-generation advanced wireless broadband service today, the majority of which is provided in the United States, Clearwire is uniquely positioned at this time to provide useful comment in this proceeding.³

¹ *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable And Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, Notice of Inquiry, GN Docket No. 07-45 (rel. April 16, 2007) (“Fifth § 706 Inquiry”).

² Fifth § 706 Inquiry at 1.

³ At the time the Commission launched its prior Section 706 Inquiry and released its Report based on the record compiled therein, *see Availability of Advanced Telecommunications Capability in the United States*, GN Docket No. 04-54, Fourth Report to Congress, 19 FCC Rcd 20540 (2004) (“Fourth § 706 Inquiry”), Clearwire had just commenced provisioning wireless broadband service in its first U.S. market over its own wireless broadband network and, thus, did not participate.

I. INTRODUCTION

Clearwire constructs and operates next generation portable wireless broadband networks and services that provide consumers an always-on broadband connection anytime and anywhere within the Clearwire coverage area. Clearwire's next-generation, non-line-of-sight wireless broadband solution connects customers to the Internet using Commission-licensed spectrum in the 2.5 GHz frequency band via radio transmissions from a Clearwire base station to a small, wireless modem, which easily connects a user's computer to the Internet. Clearwire's wireless broadband service presently provides transmission speeds of up to 1.5 mbps downlink and 256 kbps uplink.

With its simple plug-and-play installation, Clearwire provides fast, simple, reliable, and affordable wireless broadband service to those U.S. (and international) markets it has launched to date.⁴ Clearwire is deploying Motorola manufactured WiMAX-ready broadband access networks through Motorola's subsidiary, NextNet Wireless. Customers use fixed and portable subscriber unit modems operating on Clearwire's licensed and leased 2.5 GHz spectrum in the Educational Broadband Service ("EBS") and Broadband Radio Service ("BRS") frequency bands. Clearwire's U.S. broadband deployment success to date has been largely attributable to the revised rules and policies applicable to operations in the 2.5 GHz band, adopted by the Commission initially in mid-2004⁵ and again in 2006.⁶ These flexible rules and policies facilitate and encourage Clearwire's and others' use of the 2.5 GHz band for advanced wireless

⁴ Clearwire also offers portable Voice over Internet Protocol ("VoIP") service over its broadband networks in approximately 26 of its US markets to date and expects to continue rolling out this service in conjunction with its Internet access and other premium services in additional markets.

⁵ See *Report and Order* ("2004 Report and Order") and *Further Notice of Proposed Rulemaking* ("2004 Further Notice"), WT Docket No. 03-66, 19 FCC Rcd 14165 (2004).

⁶ See *Order on Reconsideration and Fifth Memorandum Opinion and Order and Third Memorandum Opinion and Order and Second Report and Order*, WT Docket No. 03-66, 21 FCC Rcd 5606 (rel. April 27, 2006) ("2006 2.5 GHz Order").

broadband services. As Clearwire has previously stated, the *2004 Report and Order* and the rules and policies adopted therein were “an excellent first step to implement legal and technical rules that will promote the availability of wireless broadband services across the country, promote the viability of such services using EBS and BRS spectrum, and foster expeditious deployment of wireless broadband systems.”⁷ Indeed, these rules make it possible for the 2.5 GHz spectrum band to finally be used to its fullest potential in providing wireless broadband services that benefit not only consumers of those services, but educational institutions, including secondary schools and institutions of higher learning, among other non-profit institutions, that are able to obtain advanced wireless broadband services through their spectrum lease relationships with Clearwire and other commercial 2.5 GHz operators.⁸

II. CLEARWIRE NETWORK AND SERVICE DEPLOYMENT

Clearwire’s 2.5 GHz wireless broadband network currently blankets 38 U.S. markets, covering approximately 9.1 million people in more than 400 municipalities in Alaska, California, Florida, Hawaii, Idaho, Minnesota, Nevada, North Carolina, Oregon, Texas, Washington and Wisconsin.⁹ Clearwire is growing rapidly in terms of the number of markets served, number of people covered by its network, and number of total subscribers. It is continuing its network deployment and service roll-out plans in additional markets throughout the United States where it currently holds 2.5 GHz spectrum rights in an effort to facilitate, along with other 2.5 GHz commercial operators, the development of a nationwide wireless third broadband pipe to the

⁷ See Clearwire Petition for Partial Reconsideration, *2004 Report and Order*, WT Docket 03-66, filed Jan. 10, 2005 at 2.

⁸ Clearwire notes that there are currently pending Petitions for Reconsideration relating to minor limited matters associated with the *2006 2.5 GHz Order*. In order to finally and fully provide regulatory certainty and stability to this frequency band which will only serve to further facilitate broadband deployment, Clearwire urges the Commission to resolve these limited issues as promptly as possible.

⁹ This represents an increase in availability of service even since the end of the first quarter 2007 when Clearwire offered its service for sale to 8.9 million people, or POPs, residing in one of the 375 municipalities in Clearwire’s 36 U.S. markets at that time.

home at 2.5 GHz.¹⁰ To this end, Clearwire has been acquiring additional spectrum in markets it believes are attractive for its services. Assuming the closing of all pending spectrum acquisition transactions, as of the end of the first quarter 2007, Clearwire's spectrum portfolio includes approximately 14.0 billion MHz POPs of spectrum in the U.S., covering an estimated 223 million people.

Clearwire's wireless broadband network currently relies on network infrastructure equipment that is based on proprietary non-line-of-sight ("NLOS"), Orthogonal Frequency Division Multiplexing ("OFDM") technologies. Clearwire is also on target to offer its first pre-WiMAX laptop card during the second half of 2007, which will substantially enhance the portability and mobility of Clearwire's current wireless broadband service. Moreover, Clearwire has committed to deploy networks based on the IEEE mobile Worldwide Interoperability of Microwave Access 802.16e-2005, or mobile WiMAX, standard once mobile WiMAX equipment is commercially available and meets our requirements. Mobile WiMAX is expected to service a range of subscribers, from individuals, households, and small businesses to market segments that depend on mobile communications, such as public safety personnel, field salespeople, traveling professionals, contractors, real estate agents and others.

Clearwire's existing Expedience network infrastructure equipment provides a level of service Clearwire believes is comparable to WiMAX capabilities, and once mobile WiMAX technology becomes commercially available and meets certain standards, Clearwire expects to deploy network components that will support fixed, portable and mobile service offerings using a single network architecture. In addition, as mobile WiMAX is a standards-based technology, Clearwire anticipates that manufacturers will eventually offer a number of handheld

¹⁰ By the end of 2007, Clearwire expects to cover a total (U.S. and international combined) of approximately 16-18 million people with up to 375,000-400,000 consolidated subscribers and approximately 2,600-2,800 operational towers sites.

communications and consumer electronic devices that will be enabled to communicate using Clearwire's mobile WiMAX network, including notebook computers, ultramobile personal computers, or PCs, personal data assistants, or PDAs, gaming consoles, MP3 players, and other handheld devices.

Clearwire engineers its wireless networks to optimize both the broadband service it offers and the number of subscribers to whom it can offer service in a market. Consequently, it currently will not launch service in a market using our current technology unless it has spectrum rights for a minimum of six 2.5 GHz channels containing at least 5 MHz of spectrum each. As a result, including pending spectrum transactions, of the 223 million people covered by Clearwire's spectrum rights as of March 31, 2007, it could commercially launch its services over spectrum covering an estimated 117 million people in the United States. Clearwire expects, however, that if the spectral efficiency of the technologies it deploys continues to evolve, as a result, it may decide to deploy wireless broadband services in some markets with less spectrum.

Clearwire has forged strategic alliances with a variety of entities that are facilitating and enhancing its efforts to launch markets and deploy its service. It has relationships with Intel Corporation and Motorola to develop and eventually deploy the mobile WiMAX wireless broadband technology Clearwire has committed to deploy as soon as commercially available. It has an alliance with Bell Canada that provided the technical and business support needed to introduce its facilities-based VoIP service. Clearwire has also entered into distribution agreements with Best Buy Co., Inc. and Circuit City Stores, Inc., two of the leading specialty electronic retailers in the United States.¹¹ Most recently, Clearwire announced an agreement with America Online ("AOL") to expand the scope of an existing distribution relationship in

¹¹ As of December 31, 2006 Clearwire services were offered in 51 Best Buy and 39 Circuit City stores in its coverage areas.

which AOL has the right to bundle and sell Clearwire's wireless broadband services in all of Clearwire's current and future U.S. markets.¹²

Finally, and significantly, pursuant to the Commission's Secondary Markets rules, Clearwire has entered into numerous long-term *de facto* leasing arrangements with EBS and BRS licensees, giving it spectrum rights to excess 2.5 GHz capacity throughout the country for use in building its advanced wireless broadband networks and providing its broadband services. To the extent possible, Clearwire intends to continue entering into such Secondary Market arrangements, as well as working cooperatively and effectively with other 2.5 GHz wireless broadband operators and licensees to provide, as rapidly as possible, a third nationwide broadband platform to vigorously compete with cable modem and DSL providers. In 2006 alone, Clearwire secured more than one billion dollars in funding from leading hardware manufacturers Intel, Motorola and Bell Canada to finance its wireless network infrastructure investment. Moreover, on December 19, 2006 Clearwire filed its initial Form S-1 registration statement with the Securities and Exchange Commission and on March 13, 2007, Clearwire completed its initial public offering of Class A common stock, raising approximately \$557 million in net proceeds.

III. CLEARWIRE SUBSCRIBER ADOPTION AND GROWTH

The wireless broadband market has evolved with the development of Clearwire's next-generation portable broadband solution. Clearwire's subscriber growth rates reflect rapid customer acceptance of its services. Clearwire ended the first quarter of 2007 with approximately 258,000 subscribers, representing a 161% increase over the first quarter of 2006. 10 out of Clearwire's initial 25 U.S. markets (launched since August 2004) have achieved the

¹² Previously, the AOL and Clearwire joint distribution agreement covered only four Clearwire markets – Jacksonville and Daytona Beach, Fla.; and Stockton and Modesto, Calif.

milestone of Market EBITDA positive status, up from 4 markets as of year-end 2006. Clearwire estimates that more than 1 out of 10 households in its respective coverage area in its initial 25 markets now have Clearwire service. As noted above, Clearwire is currently providing service in 38 markets, both urban and rural, and continues to roll out its services in markets where it has acquired an adequate amount of spectrum to do so.

Clearwire has found that there is a mass market appeal for its differentiated advanced wireless broadband services and continues to develop such services to meet that market. Clearwire's services are demanded due to the simplicity, portability, speed, reliability and affordability of its offerings. The demand for its services are evidenced by where the majority of its subscribers come from, *i.e.*, 33% of Clearwire's customer base were former cable modem subscribers, followed by 26% former DSL services, and 27% from dial-up services.

IV. CLEARWIRE NON-TRADITIONAL SERVICES

As the Commission is aware, Hurricane Katrina destroyed many traditional forms of communication including cell phone service, wireline telephone service and Internet services. Pursuant to Special Temporary Authority issued by the Commission's Wireless Telecommunications Bureau, Clearwire rapidly dispatched a team to build a temporary wireless broadband network to help provide restoral communications, including Internet and phone service, as well as equipment, to area FEMA and Red Cross emergency offices in Biloxi.

V. CONCLUSION

Clearwire is pleased to provide the information set forth above regarding its efforts to develop and deploy advanced wireless broadband networks, services and capabilities to

consumers in the United States, and hopes this information proves useful to the Commission in developing its Fifth Section 706 Report.

Respectfully submitted,

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